

FOR 331

Landscape Maintenance/Arboriculture

Spring semester, 3 Credits

Instructor: Deborah R. Hilbert, Ph.D.

Email: dhilbert@uwsp.edu

Office hours via Zoom: email for an appointment

Lecture: Mondays and Wednesdays 8:00 am – 8:50 am; **Rm:** Online

Lab: Wednesdays 2:00 pm – 3:50 pm; **Rm:** TNR 320 / Online

Required text: Lilly, Sharon J. 2022. Arborists' Certification Study Guide, 4th ed. International Society of Arboriculture (ISA), Champaign, IL. 468 pp.

This textbook was purchased from ISA for the students using their course fees.

COURSE COMMUNICATIONS

1. **Email:** For any questions or concerns regarding course material, grades, or to schedule a Zoom meeting, please email the course instructor.
2. **Course-questions discussion board:** This will be used to report problems accessing materials or other non-arboriculture computer/technical issues. It will be monitored daily by the course instructor. By posting to the discussion board, others can see the questions and answers.
3. **Assignments:** This is your compilation of sub-assignments within each module. Students will be able to access assignments on the Monday prior to the due date. Students post the week's assignment here by the following Sunday (6 days later) by 11:59 pm.
4. **Field Day:** Two field days for face-to-face instruction will be hosted in October at UWSP (see below for details). These are mandatory and are important hands-on learning opportunities!

COURSE DESCRIPTION

Arboriculture is the care of trees in developed landscapes. Arboricultural principles of tree structure, tree biology, and soil attributes are presented in light of techniques and treatments designed to evaluate and improve health and mechanical stability. Scheduled assignments and quizzes and regular interaction among students and instructor ensure that all remain engaged in the course topics.

LEARNING OUTCOMES

By the end of this course students will be able to:

1. Evaluate woody plants in relation to planting, pruning, and health using principles of woody plant biology.
2. Demonstrate basic site preparation, planting, and pruning of woody trees and shrubs.
3. Devise detailed tree assessments and risk mitigation plans through prioritization of site criteria and client objectives.
4. Communicate abstract and technical tree maintenance concepts to laypersons in a clear and concise manner.

GRADING & ASSIGNMENTS

This course uses a weighted grading system. The weight of assignment or category is listed below. The +/- system will be used in determining final grades. Your final letter grade will be evaluated based on the requirements listed below with all percentages rounded up to the nearest whole percentage:

Assignments & Weight

- Quizzes/Activities 10%
- Weekly Journal 15%
- Assignments 40%
- Final Project 25%
- Field Days 10%

Grading Scale

- A $\geq 93\%$
- A - 90-92%
- B+ 87-89%
- B 83-86%
- B- 80-82%
- C+ 77-79%
- C 71-76%
- C- 70%
- D 60-69%
- F $< 60\%$

GRADED WORK

There are **no exams**. However, there are a series of quizzes, assignments, and activities based on assigned reading materials, lecture, and activities. There is no extra-credit in this course.

Quizzes/Activities

There will be frequent quizzes over assigned readings, lectures material, and discussions. Quizzes will be delivered online via Canvas with occasional, unannounced in-class quizzes. You should always be prepared for a short quiz. There will also be occasional in-class activities – these will be announced during class and cannot be made up. One quiz or activity is automatically dropped.

Weekly Journal

Tell me what you have learned this week regarding trees and tree care. This could be how soil influences tree growth or a news article/report on urban forestry or the influence trees have on migrating bird or insect populations. Your journal entry needs to be more than just a list or retelling of facts and information. Stop to think about what you've learned and what it means in a broader context. You will also ask a pose at least one question (related to trees / arboriculture / forestry / urban forestry).

General format:

- describe what you have learned
- explain how it relates to the management of trees/urban forests
- tell me where you learned it (could be this class or anywhere else)
- write out your question (e.g., Do native trees support more pollinators than non-native trees?)
- Minimum length ~250 words, Maximum ... try not to write a book

Assignments

There will be 3 photo assignments on tree and site selection, pruning, and defects, details on the assignment will be provide via Canvas. There will also be 1 “Trees in the News” assignment where you will find and report on a current news items related to trees or forestry.

Final Project

For the final project, you will complete 1 tree risk assessment. The completed assessment will include a completed assessment form, photos (and/or video), a written report, and presentation of your findings and recommendations.

Final Exam

There is **NO** midterm and **NO** final exam.

Attendance & Late Work

Things happen. If you cannot attend class for any reason, please notify via email as soon as you know the date(s) you will miss class. Should an emergency arise, please notify as soon as practical so we can work together to get you the material.

Due dates are set to keep you on track for learning throughout the semester. Late assignments will be accepted until all the on-time assignments have been graded. Any assignments turned in after all the on-time assignments have been graded and returned will not receive credit.

How to Ace This Course

1. Prior to attempting assignments: Review your lecture notes, read the text and additional materials, and *then* tackle assignments. Your success will be maximized using this approach because you will be able apply the course vocabulary correctly.
I will know when you do not use appropriate vocabulary, concepts, and approaches, and your grade will reflect this shortcoming. Note: To accommodate different learning styles, you will notice that concepts presented in the text, web passages, and lectures overlap to a certain extent.
2. Students will be outside looking at trees for a good portion of the course! Consider printing all assignments for the module you are working on (typically a page or two), and highlight what you need to locate and photograph. Take one trip to find as many of these as possible before returning to your computer to complete and post your assignments.
3. If you stay on track with the readings and assignments and ask questions whenever you need help, the final project will be straightforward, and you should not have any issues with the course!

COURSE POLICIES

Safety: We may be working with sharp saws and pruning equipment. A safety equipment and demonstration will precede these activities. You are expected to follow all safety instructions at all times.

Classroom conduct: Students come from a variety of backgrounds and everyone (including the instructor) is expected to be respectful and polite.

Instructor responsibilities: Instructor will live up to her responsibilities in a timely manner as outlined above.

Student responsibilities: Students agree to live up to their responsibilities in a timely manner. Students will need access to a computer for lectures and a camera or cell phone with video recording capability for assignments. In this course you will be expected to complete the following types of tasks:

- communicate via email
- download and upload documents to Canvas
- read articles and documents
- view online videos
- complete quizzes/tests
- perform lab exercises

COVID-19 and other precautions

We will follow university guidance (which includes CDC guidance) regarding COVID-19, monkeypox, and other health-related issues. Please reference the UWSP's website related to COVID. The CDC website provides guidance on isolation and precautions related to COVID. As needed, we will announce policy changes that affect you in this class. It is expected that everyone will respect the needs and preferences of classmates and instructors.

Anti-Harassment Statement

The forestry discipline, following the lead of the Society of American Foresters which accredits the B.S. forestry degree, believes we all have a responsibility in creating a safe, inclusive, professional environment in all forestry-related activities and events. All forms of discrimination, harassment, and bullying are prohibited. This applies to all participants in all settings (online and in-person) and locations (on- and off-campus) where forestry classes and associated activities are conducted, including student organization events and activities, committee meetings, workshops, conferences, and other work and social functions where employees, volunteers, sponsors, vendors, or guests are present.

Discrimination is prejudicial treatment of individuals or groups of people based on their race, color, creed, religion, age, sex, sexual orientation, gender identity or expression, national origin, ethnicity, ancestry, disability, pregnancy, marital or parental status, veteran status, or any other category protected by law.

Sexual harassment is unwelcome sexual advances, requests for sexual favors, and other verbal or physical conduct of a sexual nature that creates an intimidating, hostile, or offensive environment. Sexual harassment constitutes discrimination and is illegal under federal, state, and local laws.

Bullying is unwelcome, aggressive behavior involving the use of influence, threat, intimidation, ridicule, hazing or coercion to dominate others in the professional environment. Bullying behavior may go beyond

characteristics protected by applicable laws, including but not limited to, political views, dress, or other outward physical appearances. Other types of harassment include any verbal or physical conduct directed at individuals or groups of people because of their race, ethnicity, color, national origin, sex, sexual orientation, gender identity, age, religion, disability, veteran status, or any other characteristic protected by applicable laws, that creates an intimidating, hostile, or offensive environment.

The following list, while not exhaustive, includes examples of unacceptable behavior: slurs, jokes, threats, or derogatory comments relating to the characteristics noted above. Examples of inappropriate physical harassment that violate this statement include, but are not limited to: assault, unwanted touching, or impeding or blocking movement. In addition, no individual may be denied admission to, or participation in or the benefits of, any UWSP-associated events. Similarly, the display or circulation of derogatory or demeaning posters, cards, cartoons, emails, texts, videos, and graffiti which relate to characteristics noted above violate this statement.

Reporting

Students, staff, faculty, or guests associated with Forestry-related programming who experience or witness incidents of harassment are strongly encouraged to report the incident. The Forestry discipline strongly urges the prompt reporting of complaints or concerns so that rapid and constructive action can be taken.

Reporting can be done online or in person, to a faculty or staff member, and/or the UWSP Dean of Students. Anonymous reporting is available.

The UWSP Title IX Website is the home for all information related to harassment and discrimination, including reporting options, student and employee resources, and information about what happens after a report is submitted:

<https://www3.uwsp.edu/titleix/Pages/default.aspx>

SOCIETY OF AMERICAN FORESTERS

CODE OF ETHICS

Principles and Pledges

1. Foresters have a responsibility to manage land for both current and future generations. We pledge to practice and advocate management that will maintain the long-term capacity of the land to provide the variety of materials, uses, and values desired by landowners and society.
2. Society must respect forest landowners' rights and correspondingly, landowners have a land stewardship responsibility to society. We pledge to practice and advocate forest management in accordance with landowner objectives and professional standards, and to advise landowners of the consequences of deviating from such standards.
3. Sound science is the foundation of the forestry profession. We pledge to strive for continuous improvement of our methods and our personal knowledge and skills; to perform only those services for which we are qualified; and in the biological, physical, and social sciences to use the most appropriate data, methods, and technology.

4. Public policy related to forests must be based on both scientific principles and societal values. We pledge to use our knowledge and skills to help formulate sound forest policies and laws; to challenge and correct untrue statements about forestry; and to foster dialogue among foresters, other professionals, landowners, and the public regarding forest policies.
5. Honest and open communication, coupled with respect for information given in confidence, is essential to good service. We pledge to always present, to the best of our ability, accurate and complete information; to indicate on whose behalf any public statements are made; to fully disclose and resolve any existing or potential conflicts of interest; and to keep proprietary information confidential unless the appropriate person authorizes its disclosure.
6. Professional and civic behavior must be based on honesty, fairness, good will, and respect for the law. We pledge to conduct ourselves in a civil and dignified manner; to respect the needs, contributions, and viewpoints of others; and to give due credit to others for their methods, ideas, or assistance.

COURSE CALENDAR AND MAJOR EVENTS

Module	Week	Date	Activities	Assignments and Due Dates
Module 1: Anatomy and Biology	1	Mon. 9/5	NO CLASS	Read Ch. 1 Weekly journal #1 due 9/11 at 11:59 pm Lab activities due 9/7 at 11:59 pm
		Wed. 9/7	Lecture	
		Wed. Lab	“Twig Morphology” and “Growth Episodes”	
Module 2: Structure and Mechanics	2	Mon. 9/12	Lecture	Read Supplementary Reading Weekly journal #2 due 9/18 at 11:59 pm Lab activities due 9/14 at 11:59 pm
		Wed. 9/14*	Guest Lecture	
		Wed. Lab*	Guest Instructor “Loads and Response Growth”	
Module 3: Tree ID and Selection	3	Mon. 9/19*	Lecture	Read Ch. 2 and Ch. 6 Weekly journal #3 due 9/25 at 11:59 pm Photo Assignment #1 – Tree Selection due 10/2 at 11:59 pm Lab activities due 9/21 at 11:59 pm
		Wed. 9/21	Guest Lecture	
		Wed. Lab	“Leaf Types” and “Right Tree, Right Place”	
Module 4: Soil Science and Water Management	4	Mon. 9/26	Lecture	Read Ch. 3 and 4 Weekly journal #4 due 10/2 at 11:59 pm Lab activity due 9/28 at 11:59 pm
		Wed. 9/28	Lecture	
		Wed. Lab	“Site Modifications”	
Module 5: Installation and Establishment	5	Mon. 10/3	Lecture	Read Ch. 7 Weekly journal #5 due 10/9 at 11:59 pm Lab activity due 10/5 at 11:59 pm
		Wed. 10/5	Guest Lecture	
		Wed. Lab	Activity	
Module 6: Pruning	*6	Mon. 10/10	Lecture	Read Ch. 8 and Supplementary Reading Weekly Journal #6 due 10/14 at 11:59 pm Photo Assignment #2 – Pruning Cuts due 10/16 at 11:59 pm
		Wed. 10/12	NO CLASS – WORK ON ASSIGNMENT	
		Wed. Lab	NO CLASS – WORK ON ASSIGNMENT	
FIELD DAYS	*6	Sat 10/15 Sun 10/16	Field Days	Mandatory Field Days
Module 7: Site Design and Preparation	7	Mon. 10/17	NO CLASS	Supplementary Reading Weekly journal #7 due 10/23 at 11:59 pm Lab activities due 10/19 at 11:59 pm
		Wed. 10/19	Guest Lecture	
		Wed. Lab	“Root Conflict” and “Parking Lot”	

Module 8: Tree Nutrition, Fertilization	8	Mon. 10/24	Lecture	Ch. 5 Weekly journal #8 due 10/30 at 11:59 pm Lab activity due 10/26
		Wed. 10/26	Guest Lecture	
		Wed. Lab	“Plant Nutrition”	
Module 9: Diagnosis and Disorders	9	Mon. 10/31	Lecture	Ch. 10 Weekly journal #9 due 11/6 at 11:59 pm Lab activity due 11/2 at 11:59 pm
		Wed. 11/2	Guest Lecture	
		Wed. Lab	“Diagnose This”	
Module 10: Plant Health Care	10	Mon. 11/7	Lecture	Ch. 11 and Supplementary Reading Weekly journal #10 due 11/13 at 11:59 pm Lab activity due 11/9 at 11:59 pm
		Wed. 11/9	Guest Lecture	
		Wed. Lab	“Tree Mortality Spiral”	
Module 11: Construction and Mature Trees	11	Mon. 11/14	Lecture	Ch. 13 and Supplementary Reading Weekly journal #11 due 11/20 at 11:59 pm Lab activity due 11/16 at 11:59 pm
		Wed. 11/16	Guest Lecture	
		Wed. Lab	Activity	
Module 12: Tree Risk Assessment	12	Mon 11/21	Lecture	Ch. 12 Weekly journal #12 due 11/29 at 11:59 pm Photo Assignment #3 – Tree Defects due 11:29 at 11:59 pm Lab activity due 11/23 at 11:59 pm
		Wed. 11/23	Guest Lecture	
		Wed. Lab	Activity	
Module 13: Tree Support and Lightning	13	Mon. 11/28	Lecture	Ch. 9 Weekly journal #13 due 12/4 at 11:59 pm Lab activity due 11/30 at 11:50 pm
		Wed. 11/30	Guest Lecture	
		Wed. Lab	Activity	
Module 14: Urban Forestry	14	Mon. 12/5	Lecture	Ch. 14 and Supplementary Reading Weekly journal #14 due 12/11 at 11:59 pm “Trees in the News” due 12/11 at 11:59 pm Lab activity due 12/7 at 11:59 pm
		Wed. 12/7	Guest Lecture	
		Wed. Lab	Activity	
Module 15: Tree Careers	15	Mon. 12/12	Lecture	Weekly journal #15 due 12/18 at 11:59 pm Final project due 12/21 at 11:59 pm
		Wed. 12/14	Review	
		Wed. Lab	NO CLASS – WORK ON FINAL PROJECT	
FINAL PROJECT	*16	Mon. 12/19	FINAL PROJECT	Final project due 12/21 at 11:59 pm